

# Executive Summary

As the Superfund program entered its twelfth year in December 1991, the U.S. Environmental Protection Agency (EPA or “the Agency”) continued to fulfill the requirements of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA) for protecting public health, welfare, and the environment. CERCLA requires that EPA update Congress each year on the status of the Superfund program. This Report fulfills the requirement.

EPA is committed to accelerating the pace of hazardous waste site cleanup. Fulfilling this commitment, the Agency completed clean-up activities to place a record 88 National Priorities List (NPL) sites in the construction completion category during fiscal year 1992 (FY92). By the end of the year, work had occurred at nearly 96 percent of the 1,275 sites on the NPL, including 40 sites that have been deleted. Leaving a total of 1,183 sites currently listed on the NPL for fiscal year 1992.

This Report presents information on the initiatives undertaken by the Agency during FY92 to enhance progress under the Superfund program. This Report also identifies the Agency’s accomplishments, highlighting those of FY92. Exhibit ES-1 summarizes FY92 program accomplishments. Exhibit ES-2 provides a comparison of FY92 accomplishments with those of previous years and total program accomplishments.

## Accelerating the Pace of Site Cleanup

Aggressively pursuing the acceleration of site cleanup, the Agency focused on achieving

construction completion at sites and on introducing and implementing a new model for cleanup. The Agency also continued to implement measures recommended by the 1991 30-Day Study Task Force to streamline the activities in the clean-up process.

By concluding clean-up activities at 88 NPL sites, the Agency more than doubled the number of sites in the construction completion category. These completions brought the program total of NPL sites in the construction complete category to 149, a 144 percent increase over the 61 sites in that category at the end of FY91.

A new model for Superfund clean-up action was introduced during the fiscal year to streamline the clean-up process. The Superfund Accelerated Clean-Up Model (SACM) will allow for rapid reduction of risks at Superfund sites and restoration of the environment over the long term. SACM introduces significant improvements to the existing clean-up process by

- Eliminating sequential and duplicative studies as site assessment and investigation activities are combined;
- Removing the existing overlap between the types of clean-up actions done under the Superfund removal program and those done under the remedial program, to save time and money; and
- Redefining Superfund clean-up actions as early actions and long-term actions with complementary applications.

EPA Regions initiated SACM pilot projects during FY92 to explore the benefits of the new clean-up model.

Implementing 30-Day Study Task Force

### Exhibit ES-1 Summary of Fiscal Year 1992 Superfund Activities

<b>Remedial Activities</b>		
Percentage of National Priorities List Sites Where Work Has Begun		96%
Sites Classified as Construction Completions as of September 30, 1992		149
Sites with Remedial Activities in Progress on September 30, 1992		936
Records of Decisions Signed <sup>1</sup>		126
Remedial Investigation/Feasibility Starts <sup>2</sup>		90
<i>Fund-Financed</i>		50%
<i>Potentially Responsible Party-Financed</i>		50%
Remedial Investigation/Feasibility Studies in Progress on September 30, 1992		980
Remedial Design Starts <sup>2</sup>		170
<i>Fund-Financed</i>		30%
<i>Potentially Responsible Party-Financed</i>		70%
Remedial Designs in Progress on September 30, 1992		412
Remedial Action Starts <sup>2</sup>		110
<i>Fund-Financed</i>		30%
<i>Potentially Responsible Party-Financed</i>		70%
Remedial Actions in Progress on September 30, 1992		354
<b>Removal Activities</b>		
Removal Action Starts <sup>2</sup>		380
<i>Fund-Financed</i>		280
<i>Potentially Responsible Party-Financed</i>		100
Removal Action Completions <sup>2</sup>		340
<i>Fund-Financed</i>		270
<i>Potentially Responsible Party-Financed</i>		70
<b>Site Assessment Activities</b>		
CERCLIS Sites Added <sup>2</sup>		1,800
Preliminary Assessments Conducted <sup>2</sup>		1,900
Site Inspections Conducted <sup>2</sup>		1,300
National Priorities List Site Activities to Date		1,275
<i>Sites Proposed for Listing During Fiscal Year 1992</i>		30
<i>Final Sites Listed During Fiscal Year 1992</i>		0
<i>Sites Proposed for Deletion During Fiscal Year 1992</i>		9
<i>Sites Deleted During Fiscal Year 1992</i>		2
<b>Enforcement Activities</b>		
Settlements for All Potentially Responsible Party Response Activities	241	(\$1.4 billion) <sup>3</sup>
Remedial Design/Remedial Action Settlements	90	(\$1.2 billion) <sup>4</sup>
Unilateral Administrative Orders Issued (All Actions)	110	N/A
Cost Recovery Dollars Collected	N/A	(\$185.3 million)
<b>Accomplishments at Federal Facility Sites</b>		
Records of Decision Signed		46
Remedial Investigation/Feasibility Study Starts <sup>2</sup>		100
Remedial Design Starts <sup>2</sup>		40
Remedial Action Starts <sup>2</sup>		30

<sup>1</sup> Records of decision signed for Fund-financed and potentially responsible party-financed sites.

<sup>2</sup> Numerical values for accomplishments based on information from CERCLIS have been rounded.

<sup>3</sup> Estimated value of work; potentially responsible parties have agreed to undertake.

<sup>4</sup> Remedial design/remedial action settlements include remedial design/remedial action consent decrees and unilateral administrative orders with which potentially responsible parties have stated their intention to comply.

Sources: CERCLIS; Office of Waste Programs Enforcement; Office of Emergency and Remedial Response;  
Federal Register notices through September 30, 1992.

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**Exhibit ES-2**  
**Summary of Program Activity by Fiscal Year**

	<b>FY80-86 Total</b>	<b>FY87</b>	<b>FY88</b>	<b>FY89</b>	<b>FY90</b>	<b>FY91</b>	<b>FY92</b>	<b>Total<sup>1</sup></b>	<b>Total<sup>2</sup></b>
Removal Completions <sup>2</sup>	810	230	320	260	290	270	340	2,520	2,560
National Priorities List Sites <sup>4</sup>	901	964	1,194	1,254	1,236	1,245	1,275	1,275	1,275
CERCLA Sites <sup>2</sup>	25,200	27,600	30,000	31,900	33,600	34,200	36,400	36,400	36,400
Preliminary Assessments Conducted <sup>2</sup>	20,200	4,000	2,900	2,200	1,600	1,300	1,900	34,100	34,100
Site Inspections Conducted <sup>2</sup>	6,400	1,300	1,200	1,700	1,900	1,900	1,300	15,700	15,700
Remedial Investigation/ Feasibility Study Starts <sup>2</sup>	660	210	170	170	170	70	90	1,540	2,080
Records of Decision Signed <sup>6</sup>	199	77	152	136	149	175	126	1,014	1,117
Remedial Design Starts <sup>2</sup>	120	110	120	180	130	160	170	990	1,100
Remedial Action Starts <sup>2</sup>	70	70	70	110	80	100	110	610	700
National Priorities List Deletions	13	0	4	11	1	9	2	40	40

<sup>1</sup> Includes only activities where Fund monies were spent. The total includes Fund monies spent at enforcement-led sites to oversee PFP activities.

<sup>2</sup> Also includes activities conducted by federal facilities and states where no Superfund resources were used.

<sup>3</sup> Numerical values for accomplishments based on information from CERCLIS have been rounded.

<sup>4</sup> Figures reported in this row represent the cumulative total of final, proposed, and deleted sites as of September 30, 1992. At the end of FY92, there were 1,183 final, 52 proposed, and 40 deleted sites. This includes 125 federal facility sites (116 final and 9 proposed).

<sup>6</sup> Includes new and amended records of decision.

Sources: CERCLIS; Office of Emergency and Remedial Response; Federal Register notices through September 30, 1992.

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recommendations, the Agency also engaged in efforts to streamline remedy planning, selection, and design. The Agency worked to develop presumptive remedies, technology-based standards, and soil trigger levels to standardize remedy planning and selection. The Agency also worked to shorten the remedy design phase for sites where the extent of remedial action cannot be readily determined, facilitate the resolution of site-specific issues that commonly cause delays in the clean-up process, and accelerate private party cleanups.

### Other Major Initiatives

In addition to efforts aimed at accelerating the pace of cleanup, the Agency implemented measures to improve other aspects of the Superfund program:

- To strengthen program management and accountability, the Administrator appointed the National Superfund Director and created the Superfund Revitalization Office (SRO). The mission of SRO is to improve the effectiveness

and efficiency of Superfund cleanup and administration, and to ensure equity in Superfund enforcement.

- To promote consistency in risk assessment and risk management, the Agency implemented 30-Day Study Task Force recommendations. As a first step, the Agency conducted reviews of Superfund risk assessment guidance and risk characterization practices, targeting areas needing improvement and coordination with other EPA programs. To examine issues that may lead to inconsistency in deciding the appropriate clean-up actions for sites, EPA established the National Superfund Risk Management Workgroup.
- To promote increased use of innovative treatment technologies, the Agency engaged in initiatives to demonstrate the technologies and centralize access to information about them.
- To better balance its environmental mission

with effective contract management, the Agency engaged in efforts to improve contract management and accountability, eliminate excess contract capacity, control costs, and secure quality work from contractors.

- To enhance public outreach and communications, the Agency adopted new measures of Superfund progress and developed informative publications.

### Site Evaluation Accomplishments

EPA continued its progress in identifying and assessing newly discovered sites. At the end of FY92, there were more than 36,400 sites identified in the CERCLA Information System (CERCLIS), the Superfund inventory of potentially threatening hazardous waste sites. EPA had completed site assessment activities at nearly 95 percent of these sites and determined that 1,275 of these sites should be proposed to or listed on the NPL.

To improve site evaluation, the Agency undertook projects to address the technical complexities associated with both lead- and radionuclide-contaminated sites. To better assess the effects of lead contamination, EPA continued work on the Integrated Exposure Uptake Biokinetic Model (IEUBK) and the Three City Lead Study. The IEUBK model is a tool that will aid the development of risk assessment procedures for lead-contaminated soil. The Three City Lead Study will determine whether a reduction of lead in residential soil will result in a decrease of blood-lead levels in children exposed to the contaminant.

To improve assessment of sites involving radionuclide contamination, EPA generated guidance documents for conducting assessments, conducted technology demonstrations, and increased Headquarters assistance to the Regions.

### Emergency Response Accomplishments

To protect human health and the environment from immediate or near-term threats, the Agency and potentially responsible parties (PRPs) started 380 removal actions and completed more than 340

during FY92. Of the 380 removal actions begun in FY92, PRPs financed nearly 100 and EPA financed more the 280. PRPs also financed 70 of the more than 340 completed removal actions.

Also during the year, the Agency expanded the use of removal authority for “early actions.” This expanded use of removals to reduce immediate risks and expedite cleanup at NPL sites is a key element of SACM. EPA applied the early action approach to 13 sites during FY92, drawing on \$37 million of funds allocated for this purpose.

Other FY92 emergency response highlights include Environmental Response Team accomplishments (61 removal actions, 5 oil spills, and 2 international actions), completion of two volumes of the *Superfund Removal Procedures Manual*, and promulgation of a regulation dealing with the adjustment of reportable quantities for 31 hazardous substances.

### Remedial Accomplishments

Remedial accomplishments during the fiscal year reflect the Agency’s continued efforts to accelerate the overall pace of cleanup and complete clean-up activities at an increasing number of sites. At the end of FY92, work had occurred at nearly 96 percent of the 1,275 sites on the NPL, and clean-up activities had been completed to place 149 sites (nearly 12 percent) in the construction completion category. During the year, the Agency or PRPs also started nearly 90 remedial investigation/feasibility studies (RI/FSs), more than 170 remedial designs (RDs), and more than 110 remedial actions (RAs). In addition, the Agency signed 126 records of decision (RODs) at Fund-financed or PRP-financed sites.

Proceeding with efforts initiated under the 30-Day Study, EPA worked to develop presumptive remedies for municipal landfill, wood-treating, contaminated ground-water, and solvent-contaminated sites. In other initiatives, the Agency worked toward developing standard soil trigger levels, established a construction completion category, and finalized a directive on ground-water remediation to ensure a consistent approach at

Superfund and RCRA sites. The Agency also took measures to demonstrate and provide information on innovative treatment technologies to encourage their use at Superfund sites. To this end, EPA continued the Superfund Innovative Technology Evaluation Program, the Superfund Research Grants Program, and programs to provide technical assistance, information, and training.

### Enforcement Accomplishments

Enforcement accomplishments for FY92 directly reflect the Agency's continuous commitment to maximize PRP involvement in financing and conducting cleanup, and to recover Superfund monies expended for response action. PRPs financed more than 70 percent of the RDs and RAs started in FY92. For the third consecutive year, the Agency achieved enforcement agreements with PRPs worth more than \$1 billion in response work, reaching 241 settlements worth more than \$1.4 billion during FY92. In addition, cost recovery settlements and collections increased in FY92 over previous years. The Agency achieved \$250.6 million in cost recovery settlements, as compared to \$144.3 million in FY91. Cost recovery collections in FY92 were \$185.3 million, as compared to \$83.4 million in FY91.

Enforcement initiatives in FY92 focused on improving the efficiency and fairness of Superfund enforcement. The Agency adopted a phased approach to streamline enforcement-related activities and support the faster and more efficient cleanups envisioned under SACM, while continuing to maximize the amount of response work undertaken by PRPs. In another initiative, the Agency issued guidance on early *de minimis* settlements to expedite and improve the negotiation process and reduce transaction costs for EPA and PRPs. In rulemaking activities, EPA finalized the lender liability rule to clarify the secured creditor exemption provided under CERCLA, and proposed a rule for standardizing and streamlining the cost recovery process.

### Federal Facility Cleanup

Federal departments and agencies are responsible for implementing CERCLA at federal facility sites. To ensure federal facility compliance with CERCLA

requirements, EPA provides advice and assistance, oversees activities, and takes enforcement action when appropriate. As of the end of FY92, there were 1,709 federal facility sites identified on the Federal Agency Hazardous Waste Compliance Docket. Of the sites on the docket, 125 were proposed to or listed on the NPL, including 116 final and 9 proposed sites. Activity during the fiscal year at these federal facility NPL sites included starting approximately 100 RI/FSs, 40 RDs, and 30 RAs and signing 46 RODs. As a result of 12 interagency agreements executed during the year, 104 of the 116 final federal facility NPL sites were covered by enforceable agreements for cleanup.

To clarify the roles of EPA and other federal departments and agencies with regard to NPL sites, Update 12 to the NPL, published in February 1992, distinguishes federal facility sites from non-federal sites. Other federal facility initiatives during the year focused on military base closures, acceleration of cleanups, interagency forums to address restoration issues, and innovative technology use for cleanup.

### Superfund Program Support Activities

EPA took measures in FY92 to enhance support activities in the Superfund program, including efforts to improve community relations, enhance public access to information, strengthen EPA's partnership with states and Indian tribes, and increase minority contractor utilization.

In efforts to help citizens become more knowledgeable about the technical and scientific aspects of Superfund sites, and better prepared to participate in the clean-up process, EPA awarded 37 Technical Assistance Grants (TAGs) to community groups in 9 Regions. Continuing to streamline the TAG program, EPA promulgated the TAG final rule to simplify procedures. Also, EPA revised and expanded its community relations skills course and developed several publications and fact sheets for use by EPA community relations staff and the public.

The Agency worked to improve public access to Superfund information. FY92 marked the end of EPA's five-year plan to standardize and manage the extensive Superfund document collection and incorporate it in public information and outreach

activities. The Agency worked closely with the National Technical Information Service (NTIS) to increase public awareness of the document distribution services offered by NTIS.

To promote its partnership with states and Indian tribes in the Superfund clean-up process, EPA assisted in developing comprehensive state and Indian tribe Superfund programs under 51 core program cooperative agreements (CPCAs). As a result of EPA's efforts, states and Indian tribes initiated two RI/FSs, five RDs, six RAs, and two removal actions during the fiscal year. EPA involved Indian tribes in Superfund activities by awarding site-specific cooperative agreements and CPCAs to the All-Indian Pueblo Council, the Inter-Tribal Environmental Council of Oklahoma, and the Navajo Nation.

To assist small and disadvantaged businesses, EPA, through direct and indirect procurements, awarded over \$44.5 million worth of contracts and subcontracts in FY92 to minority contractors to perform Superfund work. This amount represents almost six percent of the total dollars obligated to finance Superfund work during the year. In cooperation with the National Association of Minority Contractors, EPA conducted four training seminars to assist minority contractors in becoming more successful in winning Superfund contracts. EPA

also hosted its annual minority business enterprise and women's business enterprise workshops to familiarize minority and women business owners with the contracting opportunities available in the Superfund program.

### **Estimate of Resources Required to Implement Superfund**

Under Executive Order 12580, EPA is required to estimate the resources needed to implement Superfund. Since the enactment of CERCLA in 1980, Congress has provided Superfund with \$10.5 billion in budget authority (FY81 through FY92). This includes \$1.7 billion for FY81 through FY86, and \$8.8 billion for the post-SARA period, FY87 through FY92.

Long-term resource estimates needed to implement Superfund are based on the Outyear Liability Model (OLM). The OLM estimate of the cost to complete cleanup of current NPL sites for FY93 and beyond is more than \$16.4 billion for a total estimated cost for the program of \$26.9 billion.

### **Organization of this Report**

Information prepared for this Report is assembled in response to Congressional requirements specified in CERCLA. Exhibit ES-3 is a guide to the information required under CERCLA and its location in the Report.

**Exhibit ES-3**  
**Statutory Requirements for the Report**

<b>CERCLA Section</b>	<b>CERCLA Requirement</b>	<b>Report Section</b>	<b>Report Content</b>
301(h)(1)	Annual report to Congress on the progress achieved in implementing Superfund during the preceding fiscal year	Chapter 1	Efforts to accelerate the pace of cleanup
		Chapter 2	Initiatives to improve the Superfund program
		Chapter 3	Site evaluation accomplishments
		Chapter 4	Emergency response accomplishments
		Chapter 5	Remedial accomplishments
		Chapter 6	Enforcement accomplishments
		Chapter 7	Federal facility progress
		Chapter 8	Community relations, state and Indian tribe, and public outreach activities
301(h)(1)(A)	Detailed description of each feasibility study (FS) at a facility	Section 5.2	Overview discussion of RODs signed during the fiscal year, including the number of treatment and containment remedies selected
		Appendix C	List of RODs signed in the fiscal year
		<i>ROD Annual Report</i>	Abstracts of each ROD signed in the fiscal year
301(h)(1)(B)	Status and estimated date of completion of each FS	Appendix A	Status and estimated completion date of each FS in progress at the end of the fiscal year
301(h)(1)(C)	Notice of each FS which will not meet a previously published schedule for completion and the new estimated date for completion	Appendix A	Scheduled completion date published for the last fiscal year, the scheduled completion date recorded in CERCLIS as of end of the current fiscal year, and identification of schedule changes
301(h)(1)(D)	An evaluation of newly developed feasible and achievable permanent treatment technologies	Section 5.4	Evaluation of newly developed technologies through the Superfund Innovative Treatment Evaluation program
301(h)(1)(E) 121(c)	Progress made in reducing the number of facilities subject to review under CERCLA Section 121(c), which requires a report to the Congress a list of facilities for which a five year review is required, the results of all such reviews, and any actions taken as a result of such reviews	Section 5.5	Annual update on progress being made on sites subject to review under CERCLA Section 121(c)

Source: CERCLA, as amended by SARA; Office of Emergency and Remedial Response.

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**Exhibit ES-3 (cont'd)**  
**Statutory Requirements for the Report**

<b>CERCLA Section</b>	<b>CERCLA Requirement</b>	<b>Report Section</b>	<b>Report Content</b>
301(h)(1)(F)	Report on the status of all remedial and enforcement actions undertaken during the fiscal year, including a comparison to remedial and enforcement actions undertaken in prior fiscal years	Exhibit ES-2	A comparison of actions undertaken during the fiscal year to those undertaken in previous fiscal years
		Section 5.1	Information on fiscal year remedial activity starts (including PRP involvement) with a comparison of fiscal year activities to those of the previous fiscal year
		Section 6.2	Information on fiscal year enforcement activities with a comparison of fiscal year activities to those of the previous year
		Appendix A	Information on the status of each RI/FS and RA in progress at the end of the fiscal year
301(h)(1)(G)	Estimates of the amount of resources, including the number of work years or personnel, which would be necessary for each department, agency, or instrumentality which is carrying out any activities to complete the implementation of all duties vested in the department, agency, or instrumentality	Appendix B	Information on the status of RDs in progress at the end of the fiscal year
		Sections 9.1-9.2	EPA resource estimates for CERCLA implementation
		Section 9.3	Other federal agency's and department's estimates for CERCLA implementation
301(h)(2)	Review by the Inspector General and submission of any report related to EPA's activities for reasonableness and accuracy	Appendix E	Review of the Inspector General on this Report
105(f)	Brief description of the contracts which have been awarded to minority firms under Superfund and the efforts made to encourage the participation of such firms in the Superfund program	Section 8.4	Information on minority contracting awards by EPA, states, Indian tribes, and other federal agencies using Superfund monies. EPA efforts to encourage increased minority contractor participation in the Superfund program
120(e)(5)	Annual report to the Congress concerning EPA progress in implementing remedial activities at its facilities	Section 7.4	Report on EPA progress in CERCLA implementation at EPA-owned facilities, including a state-by-state status report

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